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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,113

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Jae-Chun Hyun

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EXAMINER

GUILL, RUSSELL L

ART UNIT

PAPER NUMBER

2123

NOTIFICATION DATE

DELIVERY MODE

05/06/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/590,113	Applicant(s) HYUN ET AL.	
	Examiner Russ Guill	Art Unit 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is in response to a Request for Continued Examination for application 10/590113. No claims were added or canceled. Claims 1 – 4, 6 have been examined. Claims 1 – 4, 6 have been rejected.
2. **The Examiner would like to thank the Applicant for the well presented response, which was useful in the examination process. The Examiner appreciates the effort to carefully analyze the Office action, and make appropriate arguments and amendments.**

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 23, 2010, has been entered.

Response to Arguments

4. Regarding claims 1 - 4, 6 rejected under 35 U.S.C. § 112, second paragraph:
 - a. Applicant's claim amendments overcome most of the rejections; however, new rejections are made below. As recited in the previous Office action, claim 1 appears to be entirely a preamble. The Examiner suggests inserting language that clearly demarcates the preamble.

5. Regarding claims 1 - 4 rejected under 35 U.S.C. § 101:
 - a. Applicant's claim amendments overcome the rejection.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1 - 4, 6 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Regarding claims 1 - 4, the claims are generally narrative and indefinite, failing to conform with current U.S. practice. It appears to be a literal translation into English from a foreign document, and the generally narrative claim language renders the claim vague and indefinite. The metes and bounds of the claim cannot be determined.

b. Regarding claim 1, the claim recites,

where $K = \exp[\varepsilon \operatorname{Det} \tau]$, $L = \nabla v - \xi D$, $2D = (\nabla v + \nabla v^T)$, $De_0 = \frac{\lambda v_0}{r_0}$, $De = De_0 \exp \left[k \left(\frac{1}{\theta} - 1 \right) \right]$.

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- i. The meaning of the variables k and T in the second line are not defined, and thus the meaning of the claim is unclear.

c. Regarding claim 1, the claim recites,

$$2C_{\theta} \int_0^{2_L} r w \sqrt{1 + (\partial r / \partial z)^2} dz - 2 \int_0^{2_L} r T_{\theta} dz = T_z$$

d.

- i. The meaning of the upper integration limits "2_L" are unclear in both integrals. The metes and bounds of the claim cannot be determined.

e. Regarding claim 1, the claim appears to be entirely a preamble. The Examiner suggests inserting language that clearly demarcates the preamble (e.g., "... the method comprising:"). In line 2, the words "which comprises," appears to modify the "film-blowing process model." Further, the claim is directed to a method for yielding transient solutions for a film blowing process, but the claim rather appears to be directed to the process of film blowing. It is unclear what the result of the claim is intended to be. The metes and bounds of the claim cannot be determined.

f. Regarding claim 3, the claim appears to be entirely a preamble. The Examiner suggests inserting language that clearly demarcates the preamble (e.g., "... further comprising:"). In line 2, the words "which comprises," appears to modify the "film-blowing process model."

g. Regarding claim 3, the claim recites in line 4, "the numerical scheme of claim 1." The term appears to have insufficient antecedent basis. Further, it is unclear

whether claim 3 is a dependent claim of claim 1, or is intended to be an independent claim.

h. Regarding claim 4, it is unclear whether the claim is entirely a preamble, or whether the phrase "which comprises" is intended to demarcate the preamble. The Examiner suggests inserting language that clearly demarcates the preamble (e.g., "... further comprising:").

i. Regarding claim 4, the claim recites in line 4, "the relative effects." The term appears to have insufficient antecedent basis.

j. Regarding claim 4, the claim recites in line 5, "which was calculated and yielded." The antecedent basis of the phrase is unclear.

k. Regarding claim 6, the claim recites in line 2, "the numerical scheme as defined in claim 1." The term appears to have insufficient antecedent basis.

l. Regarding claim 6, it is unclear whether the claim is intended to be an independent claim, or intended to be a dependent claim of claim 1. For the purpose of examination, the claim is treated as a dependent claim. For the purpose of clarity, the Examiner suggests directly incorporating into claim 6, the numerical scheme limitations of claim 1 that are intended to be included in claim 6.

m. Regarding claim 6, the claim recites in lines 10 - 11, "the expansion." The term appears to have insufficient antecedent basis.

n. Regarding claim 6, it is unclear whether the claim is entirely a preamble, or whether the phrase "which comprises" is intended to demarcate the preamble. The Examiner suggests inserting language that clearly demarcates the preamble (e.g., "... the apparatus comprising:").

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

a. Claims 1 - 4, 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

i. The MPEP recites (section 2163), “when filing an amendment an applicant should show support in the original disclosure for new or amended claims.”

ii. Regarding claim 1, the claim recites “ λ the fluid relaxation time.” This subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

iii. Regarding claim 1, the claim recites “ η_0 the zero-shear viscosity.” This subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

iv. 35 U.S.C. § 112, fourth paragraph, recites, “A claim in dependent form shall be construed to incorporate by reference all the limitations of

the claim to which it refers.” Thus the dependent claims inherit the defects of their parent claims, and the dependent claims are also rejected as discussed for their parent claims.

Allowable Subject Matter

9. Regarding claims 1 - 4, 6, any indication of allowability is withheld pending resolution of the outstanding rejections.

10. While the reference by Jae Chun Hyun et al., “Transient solutions of the dynamics in film blowing processes” appears to teach most of claim 1, the equations of claim 1 appear to differ by several terms from the equations in the axial direction taught in the reference.

Conclusion

11. Obviousness must be determined in light of the knowledge of the ordinary artisan. Prior art is not limited just to the references being applied, but includes the understanding of one of ordinary skill in the art. The following references teach knowledge of the ordinary artisan at the time of invention.

- a. Hatzikiriakos, Savvas G., et al., “Polymer Processing Instabilities: Control and Understanding,” 2005, Marcel Dekker, chapters 10 - 13, 176 pages; teaches transient solutions of polymer blowing using orthogonal collocation method (*chapter 11*).

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russ Guill whose telephone number is 571-272-7955.

The examiner can normally be reached on Monday – Friday 9:30 AM – 6:00 PM.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist: 571-272-2100.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jason Proctor/

Primary Examiner, Art Unit 2123

/Russ Guill/
Examiner
Art Unit 2123